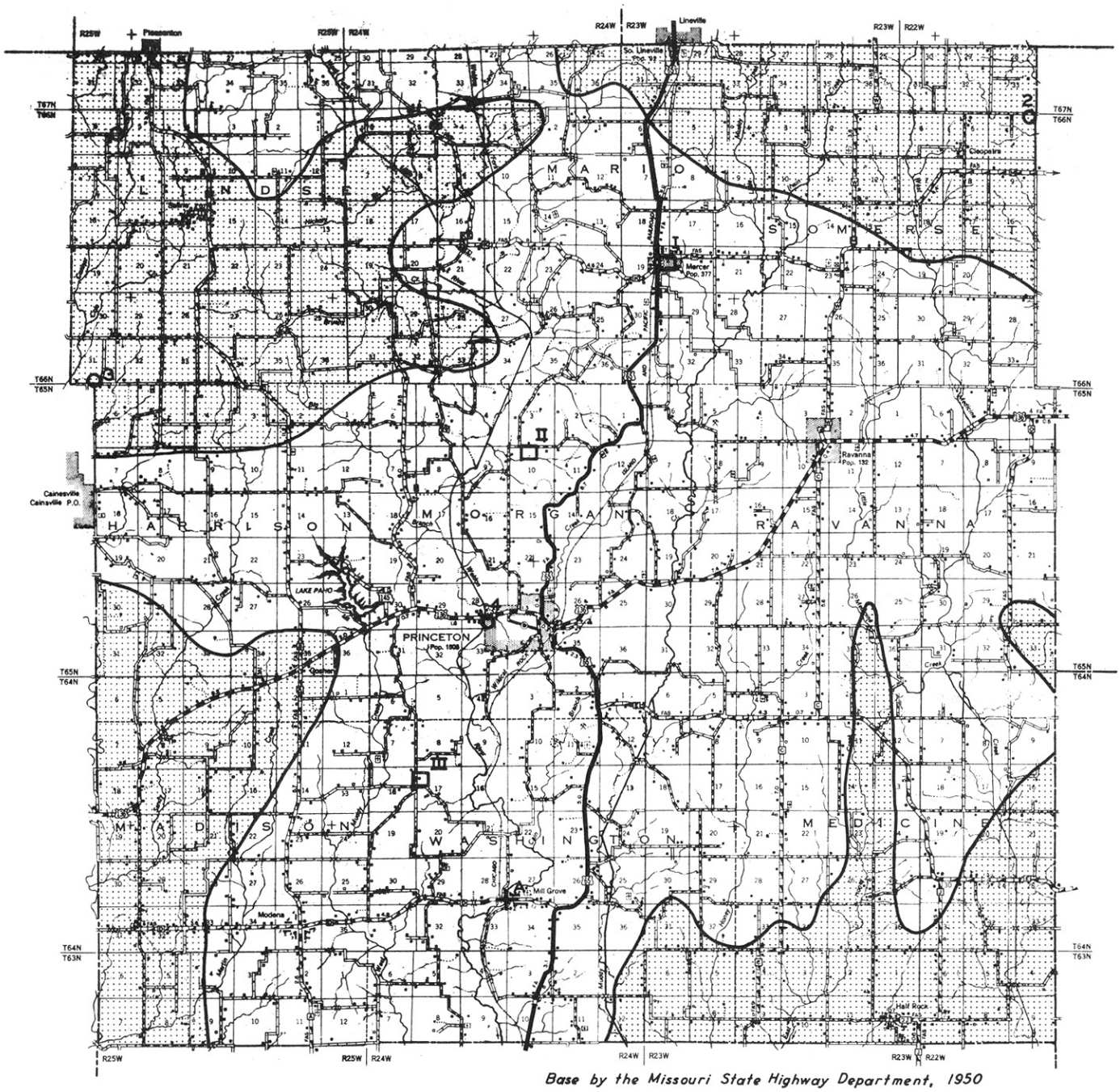


Base by the Missouri State Highway Department, 1950

LEGEND

- *Area most favorable*
- o^3 *Location of wells in drift from which water was analyzed.*
- $+^A$ *Stream water sample analyzed.*
- $\square^{III}$ *Water sample analyzed from a "rock" well.*

-N-

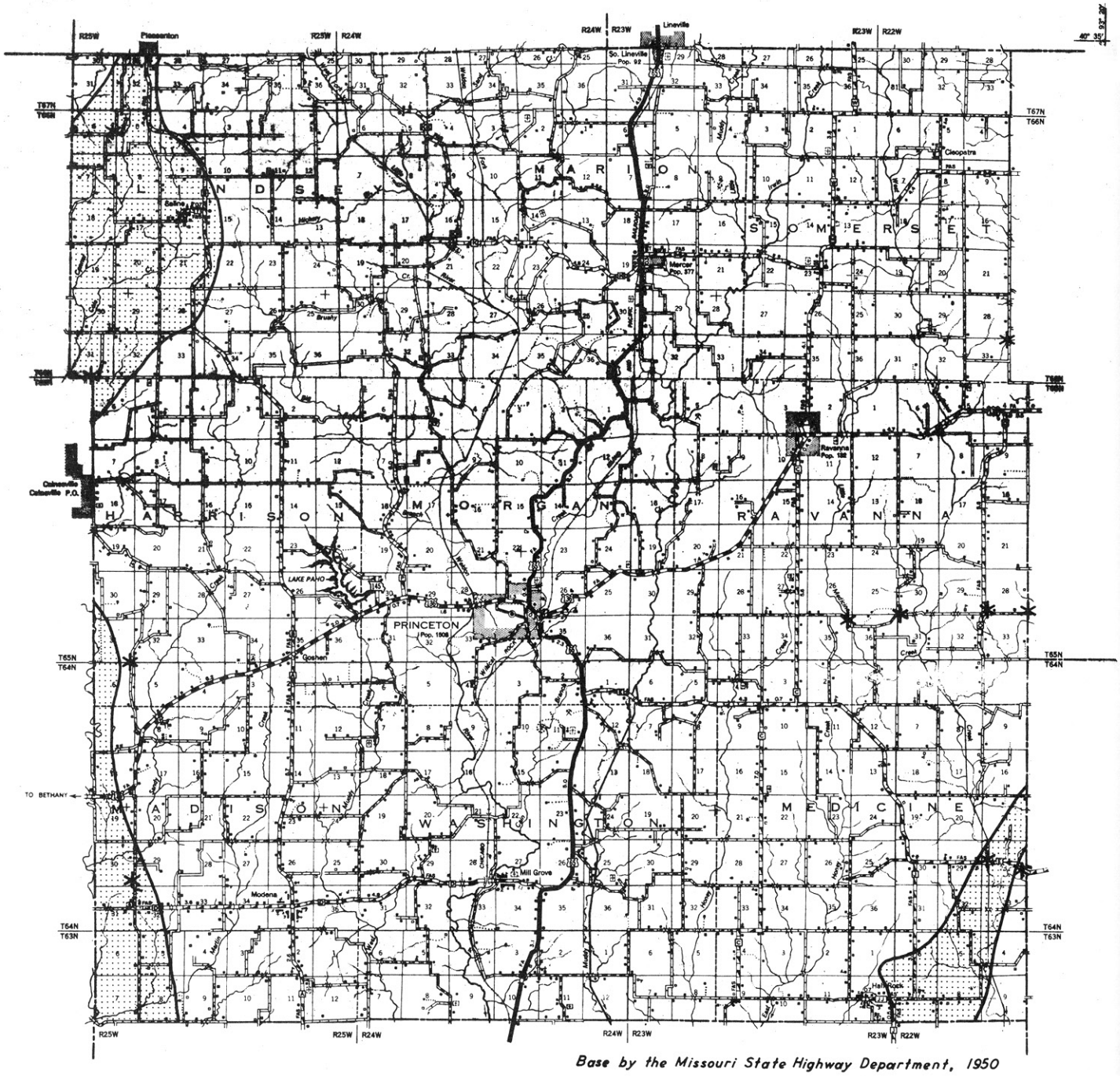
MAP OF MERCER COUNTY
SHOWING
AREAS MOST FAVORABLE FOR THE DEVELOPMENT OF WELLS IN GLACIAL DRIFT

BY
J. R. McMILLEN
AND
W. B. RUSSELL
1956

MISSOURI GEOLOGICAL SURVEY
AND WATER RESOURCES
ROLLA, MISSOURI

THOMAS R. BEVERIDGE
STATE GEOLOGIST

PLATE I



Base by the Missouri State Highway Department, 1950

LEGEND

Drift filled valley.

Test wells that flowed.

Sand analysis from this well shown on plate four.

N

MAP OF MERCER COUNTY
SHOWING
DRIFT FILLED VALLEY IN WHICH IRRIGATION WELLS POSSIBLY CAN BE DEVELOPED

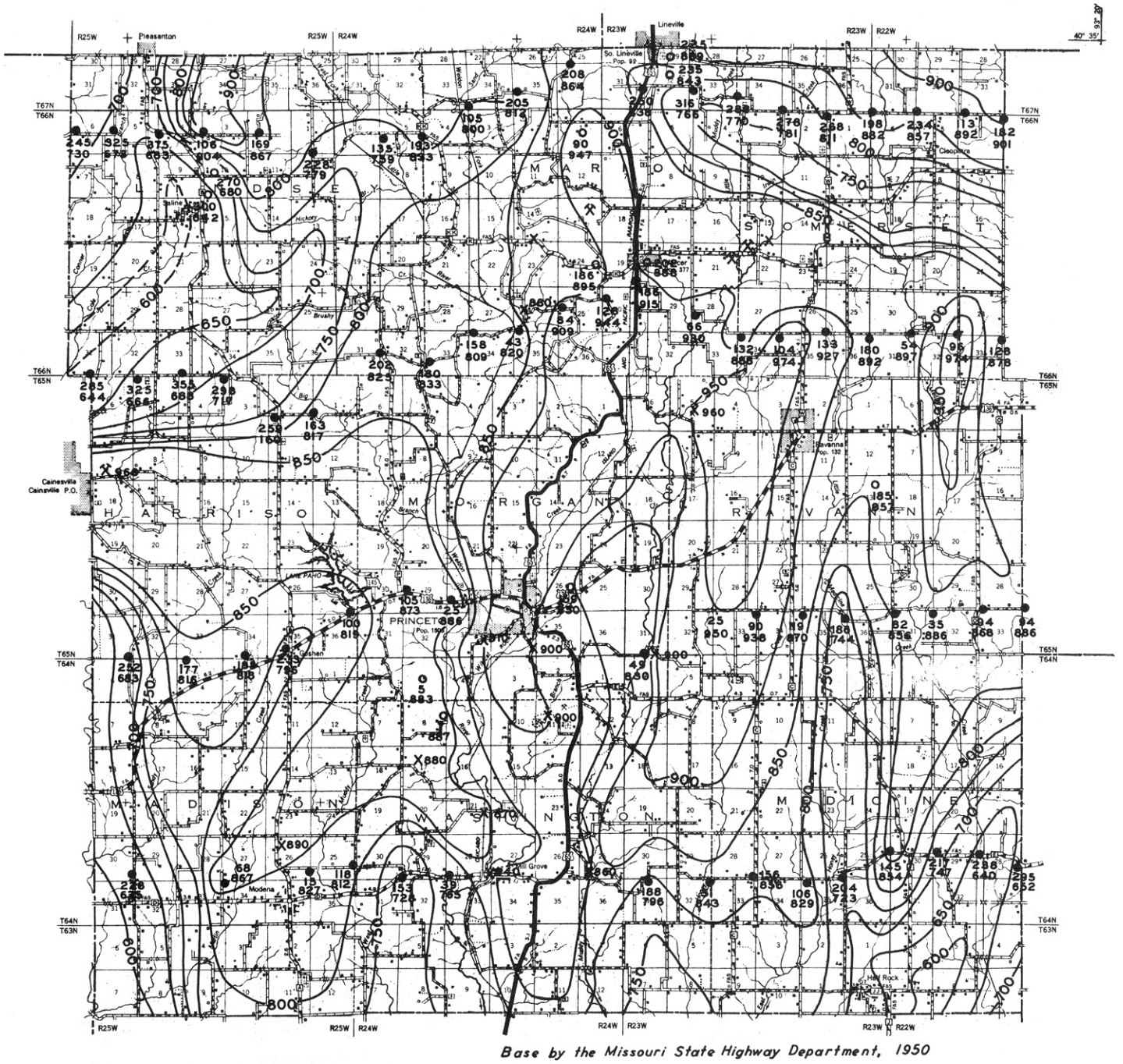
BY
J. R. McMILLEN
AND
W. B. RUSSELL

1956

MISSOURI GEOLOGICAL SURVEY
AND WATER RESOURCES
ROLLA, MISSOURI

THOMAS R. BEVERIDGE
STATE GEOLOGIST

PLATE 2



Base by the Missouri State Highway Department, 1950

LEGEND

- ●135 / 650 — *Test holes showing thickness in feet of drift and elevation of bedrock above sea level.*
- o — *Water wells*
- X — *Outcrops*
- ⚒ — *Quarry*

Contour interval 50 feet

-N-

CONTOUR MAP OF MERCER COUNTY SHOWING BEDROCK ELEVATIONS

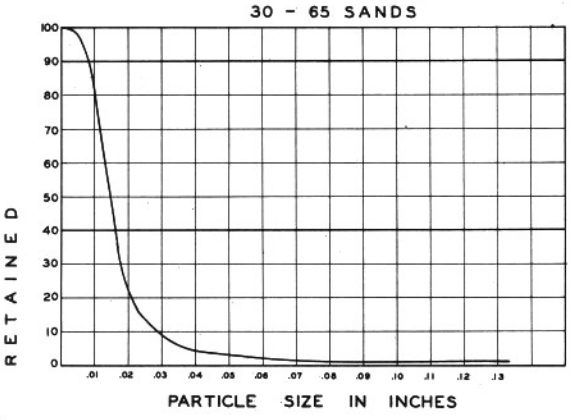
BY

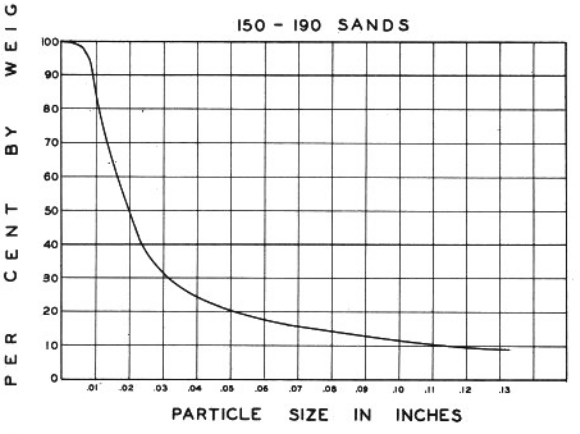
J. R. McMILLEN
AND
W. B. RUSSELL
1956

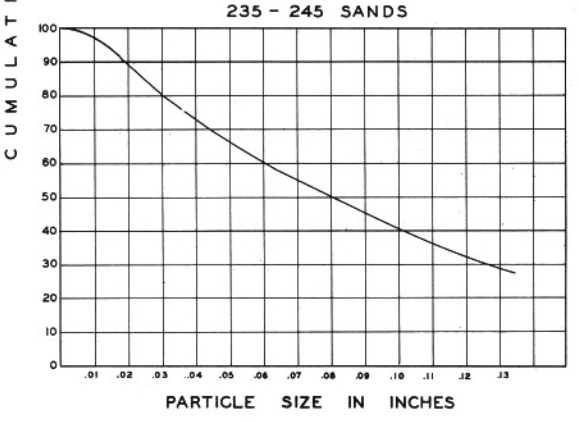
MISSOURI GEOLOGICAL SURVEY
AND WATER RESOURCES
ROLLA, MISSOURI

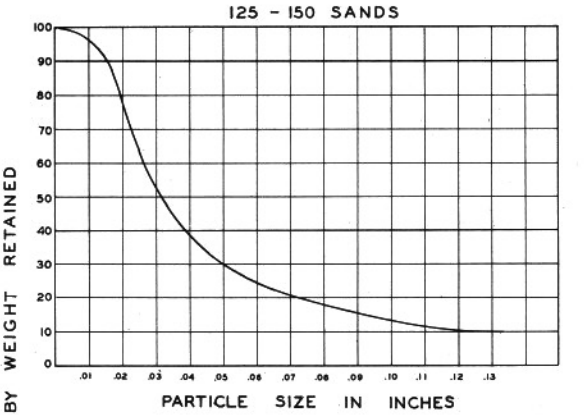
THOMAS R. BEVERIDGE
STATE GEOLOGIST

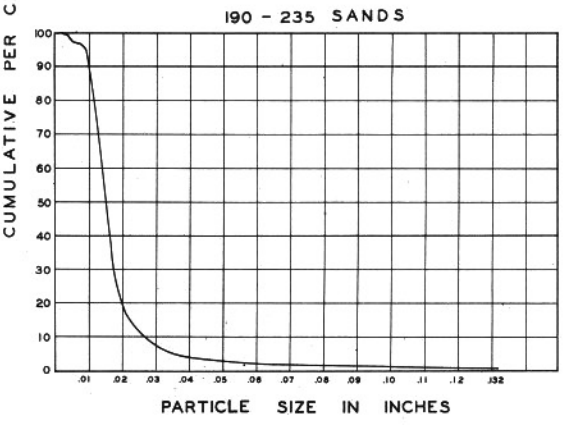
PLATE 3











SIEVE ANALYSES OF SANDS

FOUND AT VARIOUS DEPTHS IN

TEST WELL Nº 119

SW¼-NW¼- SEC. 6, T 66N. R25W. MERCER CO., MISSOURI.

DALE FULLER, MAR. 1956.

MISSOURI GEOLOGICAL SURVEY AND WATER RESOURCES

THOMAS R. BEVERIDGE, STATE GEOLOGIST

PLATE 4

thousandths of an inch. These plotted points are then connected with a smooth curve. A sand analysis curve shows at a glance how much of the material is smaller or larger than a given particle size. For more complete consideration, the slope and shape of the curves determines the types of well development that should be used.

To attain high yields in sands and gravels requires careful sampling by the well driller. Then, a competent analysis of these samples is the guide to proper well development. Also, good sampling and sieve analyses are necessary to develop low yield (domestic type) wells in sands which are so fine that they require well screens and/or gravel pack treatment.

SUMMARY

Results of the test drilling program in Mercer County show the following:

(1) Approximately 22,000 acres of Mercer County are located within the area where irrigation wells possibly can be developed.

(2) Nearly one-third of Mercer County lies in glacial drift areas where sufficient water supplies for domestic needs are available.

Questions concerning water problems for a specific location should be sent to the Missouri Geological Survey and Water Resources, Buehler Park Box 250, Rolla, Missouri 65401.